

CLAIMS

1. Abrasive grain containing electro-fused alumina, characterized in that it is formed of crystals of hexagonal structure less than 100  $\mu\text{m}$  in size, having a density that is greater than 97 % of the theoretical density of alumina and a Knoop hardness of more than 2000.

2. Abrasive grain according to claim 1, characterized in that crystal size is less than 30  $\mu\text{m}$ .

3. Abrasive grain according to claim 2, characterized in that crystal size is less than 5  $\mu\text{m}$ .

4. Abrasive grain according to claim 1, characterized in that its density is less than 98 % of the theoretical density of alumina.

5. Abrasive grain according to any of claims 1 to 4, characterized in that its Knoop hardness is greater than 2050.

6. Method for producing abrasive grains containing electro-fused alumina, comprising melting of the alumina, its casting at a constant flow rate of less than 80 Kg/min, and its cooling by dispersion of the molten alumina in fine droplets to give particles having a size of less than 1 mm.

7. Method according to claim 6, characterized in that the casting flow rate is less than 50 kg/min.

8. Method according to either of claims 6 or 7, characterized in that casting is conducted through a nozzle heated by induction.

9. Method according to any of claims 6 to 8, characterized in that the dispersion of the molten alumina is obtained by ultrasound assisted atomization.

10. Method according to claim 9, characterized in that the ultrasound frequency lies between 15 and 50 kHz.